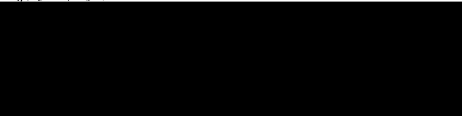


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13 September 1965

Please Reference:
A51-65-3345

U. S. Government



Subject: 4 x 5 Chip Processor

Gentlemen:

In co-operation with [redacted] a review was made of the 4 x 5 Chip Processor with the objective of evaluating the possibility of employing it as a sensitometric processor for use on Contract [redacted]

A shortened form of step wedge as obtained from an [redacted] sensitometer was sent to [redacted]. This strip is approximately 5-1/2-inches in length, as against the 9-1/2-inches length of the standard step wedge, and as such, it will be possible to process these shorter step wedges in the 4 x 5 Chip Processor by providing suitable plastic mounting frames.

Other changes required to adapt the processor for sensitometric processing are as follows:

1. Increase the temperature control range to 130°F.
2. Increase the transport speed to give a minimum developing time of 5 seconds.
3. Manufacture plastic mounting frames.

continued - - -

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Declass Review by NIMA/DOD

GROUP - 1
Excluded from
Automatic
Downgrading and
declassification

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I am informed by [REDACTED] that if agreement on the adaptation of the Chip Processor as suggested is reached, a saving in time and money will be effected if the changes are made before assembly of the Chip Processor is completed. The changes proposed above will in no way degrade the capability of the Chip Processor to meet specification requirements.

I enclose also a copy of a proposed performance evaluation program for the Chip Processor.

If the above program is approved, the use of an [REDACTED] Sensitometer will be required as G. F. E.

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Please advise at your earliest convenience if this proposal meets with your approval, and whether or not a [REDACTED] Sensitometer is available. We will withhold any pricing action pending your comments.

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Very truly yours,

[REDACTED]

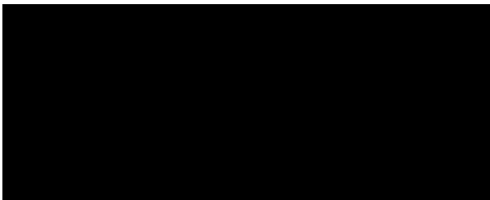
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Encl.

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PROPOSED 4 x 5 CHIP PROCESSOR PERFORMANCE
EVALUATION PROGRAM

September 1965



25X1A

OBJECTIVE

The objective of this program is to establish the photographic and functional performance of the processor.

PHASE I - EVALUATE PROCESSOR PERFORMANCE

Preliminary check-out to determine if all electrical, mechanical and plumbing systems are functioning properly.

1. Temperature Indicator Accuracy
Check ready light indicator against actual solution temperatures.
2. Solution Temperature Pull-Up Time
Determine the time required to heat processing solution from ambient temperature to working temperature (predetermined set point). ✓
3. Solution Temperature Stabilization
After solution stabilizes, record temperature to determine set point of heating system.
4. Drier Temperature Pull-Up Time
Determine the time required to elevate the drier temperature to set point of heater system. Record maximum dry box temperature. ✓
5. Film Transport System
Determine the accuracy of the transport system. Record variation.
6. Light Tightness
Visual examination of the film after processing in normal room light.
7. Power Consumption
Check starting and continuous operating electrical loads. ✓
8. Check Drain System

PHASE II - PHOTOGRAPHIC QUALITY TESTING

1. Film and Exposure
Check performance of processor to determine its capability of producing an even edge to edge density consistently. ✓
2. Replenish System
Determine the rate of replenisher for both developer and fixer (cc/minute). ✓

3. Physical and Photographic Defects on Film

- | | |
|----------------|-----------------|
| A. Scratches | D. Creases |
| B. Mottling | E. Drying |
| C. Dust Specks | F. Drying Marks |

4. Wash Section
Determine GPM.

5. Archival Quality
Residual thiosulfate content will be determined as per ASA pH 4.8 1958.

6. Summary of Performance

7. Recommendations as necessary

Determine Proper selection of film-developer combinations, processing temperatures, speeds, etc for highest quality output (resolution, gamma)